

RECEIVED
CENTRAL FAX CENTER

AUG 22 2006

REMARKS

Claims 26, 28-36, and 38-45 are pending. Claims 26-45 are rejected under 35 U.S.C. §112, second paragraph. Claims 26-45 are rejected under 35 U.S.C. §103(a), as being unpatentable over Alamouti et al. (U.S. Pat. No. 6,775,329). Claims 26, 28-31, 35-36, 38-41, and 43 are currently amended. Claims 27 and 37 are cancelled without prejudice.

Claims 26-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 34-65 of copending Application Ser. No. 10/659,906. Applicants wish to defer a terminal disclaimer until claims are allowed in the copending Application.

Claims 26-45 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner further states claims 26-45 are incomplete for omitting essential elements. Applicants have adopted most of Examiner's suggested amendments with some differences. Limitations from claim 27 are added to claim 26. Claim 27 is cancelled without prejudice. Likewise, limitations from claim 37 are added to claim 36. Claim 37 is cancelled without prejudice.

Referring to Figures 2 and 3 of the instant specification, for example, claim 26 recites "An apparatus, comprising: a correction circuit (Figure 3) coupled to receive a first symbol (S_1) transmitted from a first antenna (ANT 1) at a one time and a complement of a conjugate of a second symbol ($-S_2^*$) transmitted from a second antenna (ANT 2) at the one time, and coupled to receive the second symbol (S_2) transmitted from the first antenna (ANT 1) at another time and a conjugate of the first symbol (S_1^*) transmitted from the second antenna (ANT 2) at the another time, the correction circuit producing a first symbol estimate in response to the first symbol (S_1 from R_1^1) and the conjugate of the first symbol (S_1^* from R_1^2); and a combining circuit coupled to receive a plurality of symbol estimates including the first symbol estimate, the plurality of symbol estimates corresponding to a respective plurality of signal paths (Equations 5 and 6, $i=0$ through $2N-1$), the

TI-28441A, Page 7

combining circuit (820, Figure 8) producing a first symbol signal (\tilde{S}_1) in response to the plurality of symbol estimates." (numerals added). Other claims are amended for consistency. Claims 26, 28-36, and 38-45, as amended, are definite and particularly point out and distinctly claim the subject matter which applicant regards as the invention. Thus, claims 26, 28-36, and 38-45 are patentable under 35 U.S.C. §112, second paragraph.

Claims 26-45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Alamouti et al. (U.S. Pat. No. 6,775,329). Examiner specifically refers to Figure 4 and Table 1 of Alamouti et al. Claims 26, 28-36, and 38-45, as amended, define a very different encoding and decoding scheme from Alamouti et al. In particular, Alamouti et al. produce symbols s_0 and $-s_1^*$ from Antenna 11 and symbols s_1 and s_0^* from Antenna 12. Examiner will note that a conjugate is produced from each transmit antenna at alternating symbol times. This means that the scheme of Alamouti et al. is not backwards with existing receivers without space time diversity. The present invention, however, encodes and decodes symbols S_1 and S_2 from ANT 1. This is highly advantageous in maintaining backwards compatibility with existing receivers. Thus, claims 26, 28-36, and 38-45 are patentable under 35 U.S.C. §103(a) over Alamouti et al.

In view of the foregoing, applicants respectfully request reconsideration and allowance of claims 26, 28-36, and 38-45. If the Examiner finds any issue that is unresolved, please call applicants' attorney by dialing the telephone number printed below.

Respectfully submitted,



Robert N. Rountree
Attorney for Applicants
Reg. No. 39,347

Robert N. Rountree, LLC
70360 Highway 69
Cotopaxi, CO 81223
Phone/Fax: (719) 783-0990

TI-28441A, Page 8